

### ABSTRACT OF THE DISCLOSURE

A displacement measurement device has a detector area which is larger than the area of the beam spot reflected from the measurement surface. The detector area is made larger than the size of the beam spot on the detector area, in order to accommodate shifts in the location of the beam spot due to changes in the precise locations of the components of the displacement measurement device. The subset of pixels in the detector area having advantageous correlation characteristics, is then selected to perform the correlation calculation, thereby reducing data processing time requirements.